AMENDMENTS TO THE CLAIMS

The following is a complete listing of the claims with a status identifier in parenthesis.

Listing of the Claims:

1. (Previously Presented) A plasma-spraying device for spraying a powdered material, comprising electrodes, which form a plasma channel having an inlet end and an outlet end, and means for supplying said powdered material to said plasma channel, wherein said powder supply means is arranged between a first section of said electrodes located upstream of the means and a second section of said electrodes located downstream of the means, as seen in the direction of plasma flow of the plasma channel, and wherein the diameter of the plasma channel in at least one section is greater than the diameter of the plasma channel in each section located upstream of said section.

2. (Previously Presented) A plasma-spraying device for spraying a powdered material, comprising electrodes, which form a plasma channel having an inlet end and an outlet end, and means for supplying said powdered material to said plasma channel, wherein said powder supply means is arranged between a first section of said electrodes located upstream of the means and a second section of said electrodes located downstream of the means, as seen in the direction of plasma flow of the plasma channel, and wherein at least in one section, the length of the furthest upstream electrode equals the diameter of the plasma channel in this electrode.

3. (Previously Presented) A plasma-spraying device as claimed in claim 1, wherein at least one of the following parameters is different between said first and second sections: the

length of the section, the number of electrodes in the section and the geometry of the plasma channel in the section.

4. (Previously Presented) A plasma-spraying device as claimed in claim 1, wherein an additional powder supply means is arranged between a third section of electrodes and one of said first and second sections.

5. (Previously Presented) A plasma-spraying device as claimed in claim 1, wherein a plurality of powder supply means are provided, each of said powder supply means being arranged between a section of said electrodes located upstream of the means and a section of said electrodes located downstream of the means.

6. (Previously Presented) A plasma-spraying device as claimed in claim 1, wherein the number of electrodes in at least one section is at least two.

7. (Previously Presented) A plasma-spraying device as claimed in claim 6, wherein the number of electrodes in the section closest to said inlet end of the plasma channel is at least two.

8. (Previously Presented) A plasma-spraying device as claimed in claim 1, wherein the powder supply means forms a space for supplying powder at an angle to a center axis of the plasma channel.

9. (Previously Presented) A plasma-spraying device as claimed in claim 8, wherein said space is formed by a projection on the electrode closest upstream of the means, which is arranged at a distance from a recess in the electrode closest downstream of the means.

10. (Previously Presented) A plasma-spraying device as claimed in claim 9, wherein said projection is conical and makes an angle (α) with the center axis of the plasma channel.

11. (Previously Presented) A plasma-spraying device as claimed in claim 10, wherein said angle (α) is 15-25°.

12. (Previously Presented) A plasma-spraying device as claimed in claim 9, wherein said recess is conical and makes an angle (β) with the center axis of the plasma channel.

13. (Previously Presented) A plasma-spraying device as claimed in claim 12, wherein said angle (β) is 17-30°.

14. (Previously Presented) A plasma-spraying device as claimed in claim 12, wherein the difference between said angle of the recess and said angle of the projection (β-α) is 1.5° to 5°.

15. (Previously Presented) A plasma-spraying device as claimed in claim 1, wherein the powder supply means comprises openings that are oriented at an angle to the center axis of the plasma channel to obtain a tangential powder supply.

16. (Previously Presented) A plasma-spraying device as claimed in claim 1, wherein the diameter of the plasma channel in one section is greater than the diameter of the plasma channel in the section located upstream of said section.

17. (Previously Presented) A plasma-spraying device as claimed in claim 2, wherein the diameter of the plasma channel in at least one section is greater than the diameter of the plasma channel in each section located upstream of said section.

18. (Previously Presented) A plasma-spraying device as claimed in claim 1, wherein the length of the electrodes is increased by their distance from the inlet end of the plasma channel.

19. (Previously Presented) A plasma-spraying device as claimed in claim 1, wherein at least in one section, the length of the furthest upstream electrode equals the diameter of the plasma channel in said furthest upstream electrode in said section.

20. (Previously Presented) A plasma-spraying device as claimed in claim 2, wherein in one section, the length of the electrodes in the section, which are located downstream of said furthest upstream electrode, is calculated as

$$Ln = n \times dchannel$$

where Ln is the length of electrode n, n is the ordinal number of the electrode in a section and dchannel is the diameter of the plasma channel in said electrode n.

21. (Previously Presented) A plasma-spraying device as claimed in claim 1, wherein at least in one section, the diameter of the plasma channel varies in said section.

22. (Previously Presented) A plasma-spraying device as claimed in claim 1, which further comprises a cathode and an anode arranged at a distance from the cathode and coaxial therewith, between which an electric arc is generated, during use of said device, into which gas is introduced to form a plasma, said electrodes being arranged between said cathode and said anode forming said plasma channel.

23. (Previously Presented) A plasma-spraying device as claimed in claim 1, wherein said electrodes are annular.

24. (Previously Presented) A plasma-spraying device as claimed in claim 1, wherein said electrodes are coaxially arranged.

25. (Previously Presented) A method of supplying a powdered material by using a plasma-spraying device comprising electrodes, which form a plasma channel having an inlet end and an outlet end, comprising:

supplying the powdered material to the plasma-spraying device in at least one supply point located between two sections of said electrodes, which sections are located respectively upstream and downstream of the supply point, wherein the diameter of the plasma channel is adapted in at least one section to be greater than the diameter of the plasma channel in each section located upstream of said section.

26. (Previously Presented) A method of supplying a powdered material by using a plasma-spraying device comprising electrodes, which form a plasma channel having an inlet end and an outlet end, comprising:

supplying the powdered material to the plasma-spraying device in at least one supply point located between two sections of said electrodes, which sections are located respectively upstream and downstream of the supply point, wherein at least in one section, the length of the furthest upstream electrode is adapted to equals the diameter of the plasma channel in this electrode.

27. (Currently Amended) A method of ~~plasma-spraying~~ supplying a powdered material as claimed in claim 25, wherein the section located downstream of the supply point is used to control the heating of the powdered material and other properties of the powder.

28. (Currently Amended) A method of ~~plasma-spraying~~ supplying a powdered material as claimed in claim 25, wherein at least one of the following parameters is different between said sections located respectively upstream and downstream: the length of the section, the number of electrodes in the section and the geometry of the plasma channel in the section.

29. (Previously Presented) A method as claimed in claim 25, wherein a powdered material is supplied in at least two supply points located between the two sections of said electrodes, which sections are located respectively upstream and downstream of the respective supply points.

30. – 34. (Cancelled)